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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,820	10/31/2003	Matthew Englehart	MWS-062RCE2	1288

74321 7590 12/22/2009
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EXAMINER

CHEN, QING

ART UNIT	PAPER NUMBER
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2191

MAIL DATE	DELIVERY MODE
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12/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of Allowability

Application No.

10/698,820

Examiner

Qing Chen

Applicant(s)

ENGLEHART ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on October 6, 2009.
2. ☒ The allowed claim(s) is/are 1,5-12,15,16 and 20-26, renumbered as 1-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

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DETAILED ACTION

1. This Office action is in response to the amendment filed on October 6, 2009.
2. **Claims 1, 5-12, 15, 16, and 20-26** are pending.
3. **Claims 1, 5, 12, 16, and 20** have been amended.
4. **Claims 2-4, 13, 14, and 17-19** have been canceled.
5. **Claims 1, 5-12, 15, 16, and 20-26** are allowed, renumbered as 1-18.
6. The objections to Claims 3, 13, and 18 are withdrawn in view of Examiner's cancellation of the claims.

Examiner's Amendment

7. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Kevin J. Canning (Reg. No. 35,470) on November 10, 2009.

The application has been amended as follows:

AMENDMENTS TO THE CLAIMS

Please cancel Claims 2-4, 13, 14, and 17-19 and amend Claims 1, 5, 12, 16, and 20 as follows:

1. (Currently Amended) In an electronic device having a graphical modeling and execution environment, said graphical modeling and execution environment including at least one graphical model, a method comprising:

providing an automatic code generator to create source code that implements functionality of said at least one graphical model and that corresponds to data referenced by said at least one graphical model;

providing a predefined storage class in said graphical modeling and execution environment, said predefined storage class specifying a first manner in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment;

providing a user interface with a plurality of selectable parameters;

defining a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters, said custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, said second manner differing from said first manner;

[[and]]

generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating comprising:

using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model;

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providing a view of salient aspects of said source code generated by said automatic code generator utilizing said user-selected parameters;

changing said user-selected parameters for said custom storage class in said user interface;

adjusting said source code generated by said automatic code generator to reflect said change in said user-selected parameters; and

displaying salient aspects of said adjusted source code in said view of salient aspects of said source code.

2-4. (Canceled)

5. (Currently Amended) The method of claim [[2]]1, wherein said view of salient aspects of said source code automatically generated includes at least one token, said at least one token being symbolically representative of a non-displayed segment of said source code.

12. (Currently Amended) An electronic device having a modeling and execution environment with at least one graphical model, said electronic device comprising:

a processor for:

providing an automatic code generator to create source code that implements functionality of said at least one graphical model and that corresponds to data referenced by said at least one graphical model,

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providing a predefined storage class specifying a first manner in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model in said modeling and execution environment,

defining a custom storage class in said modeling and execution environment utilizing parameters selected by a user from a plurality of selectable parameters, said custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said modeling and execution environment, said second manner differing from said first manner, and

generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model; and

a display device for:

displaying a user interface with said plurality of selectable parameters for said custom storage class, said user-selected parameters for said custom storage class in said user interface are changed and said source code generated by said automatic code generator is adjusted to reflect said change in user-selected parameters, and

displaying a view of salient aspects of said source code generated by said automatic code generator utilizing said user-selected parameters, said adjusted source code is displayed in said view of salient aspects of said source code.

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13. (Canceled)

14. (Canceled)

16. (Currently Amended) A computer-readable medium for use in an electronic device having a graphical modeling and execution environment, said graphical modeling and execution environment including at least one graphical model, said computer-readable medium storing computer-executable instructions for:

providing an automatic code generator to create source code that implements functionality of said at least one graphical model and that corresponds to data referenced by said at least one graphical model;

providing a predefined storage class in said graphical modeling and execution environment, said predefined storage class specifying a first manner in which said automatic code generator creates said source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment;

providing a user interface with a plurality of selectable parameters;

defining a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters, said custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, said second manner differing from said first manner;

[[and]]

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generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating comprising:

using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model;

providing a view of salient aspects of said source code generated by said automatic code generator utilizing said user-selected parameters;

changing said user-selected parameters for said custom storage class in said user interface;

adjusting said source code generated by said automatic code generator to reflect said change in user-selected parameters; and

displaying said adjusted source code in said view of salient aspects of said source code.

17-19. (Canceled)

20. (Currently Amended) The computer-readable medium of claim ~~[[17]]~~16, wherein said view of salient aspects of said source code automatically generated includes at least one token, said at least one token being symbolically representative of a non-displayed segment of said source code.

-- END OF AMENDMENT --

Reasons for Allowance

8. The following is an Examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, “defining a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters, said custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, said second manner differing from said first manner; generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating comprising: using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model; providing a view of salient aspects of said source code generated by said automatic code generator utilizing said user-selected parameters; changing said user-selected parameters for said custom storage class in said user interface; adjusting said source code generated by said automatic code generator to reflect said change in said user-selected parameters; and displaying salient aspects of said adjusted source code in said view of salient aspects of said source code” as recited in independent Claim 1; and further fail to teach, in combination with the other claimed limitations, similarly-worded limitations recited in independent Claims 12 and 16.

The closest cited prior art, the combination of “Real-Time Workshop® User's Guide,” January 1999 (hereinafter “RTW_UG”) and US 2003/0056195 (hereinafter “Hunt”), teaches using Real-Time Workshop to produce code directly from Simulink models and automatically

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build programs that can be run in a variety of environments, including real-time systems and stand-alone simulations. However, the combination of RTW_UG and Hunt fails to teach “defining a custom storage class in said graphical modeling and execution environment utilizing parameters selected by a user from said plurality of selectable parameters, said custom storage class specifying a second manner in which said automatic code generator creates source code corresponding to said data referenced by said at least one graphical model in said graphical modeling and execution environment, said second manner differing from said first manner; generating source code implementing said functionality of said at least one graphical model using said automatic code generator, said generating comprising: using said custom storage class to generate source code corresponding to said data referenced by said at least one graphical model; providing a view of salient aspects of said source code generated by said automatic code generator utilizing said user-selected parameters; changing said user-selected parameters for said custom storage class in said user interface; adjusting said source code generated by said automatic code generator to reflect said change in said user-selected parameters; and displaying salient aspects of said adjusted source code in said view of salient aspects of said source code” as recited in independent Claim 1; and further fails to teach similarly-worded limitations recited in independent Claims 12 and 16.

Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191